Direct Images of Nearby Debris Disks Using Present-day Coronagraphy

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We show the latest results from our coronagraphic imaging campaigns to detect and characterize debris disks in scattered light around nearby A through M stars. In the diffraction-limited regime we utilize NIR coronagraphs with adaptive optics from the ground, and the optical coronagraph installed in the Advanced Camera for Surveys (ACS) aboard HST. We also acquire high-contrast data with a seeing-limited optical coronagraph at the University of Hawaii 2.2-m telescope on Mauna Kea. New results from our survey for debris disks include the discovery of a near edge-on dust disk surrounding the nearby M star AU Mic (GJ 803). AU Mic is a sister star to β Pic and we compare the properties of the two debris disks. At only 10 pc from the Sun, AU Mic offers the community an unprecedented direct view of circumstellar material in an extrasolar analog of our Kuiper Belt and Inner Oort Cloud. We also present new Keck adaptive optics observations of the β Pic disk in NIR scattered light, and discuss the technique of roll deconvolution with alt-az telescopes. Finally, we show the first results of using roll deconvolution with the ACS Wide Field Camera. These data provide the deepest and sharpest multi-color views of β Pic's debris disk between 100 and 1000 AU radius.